

Algebra II GHP
Unit 4 Test Review

Name _____

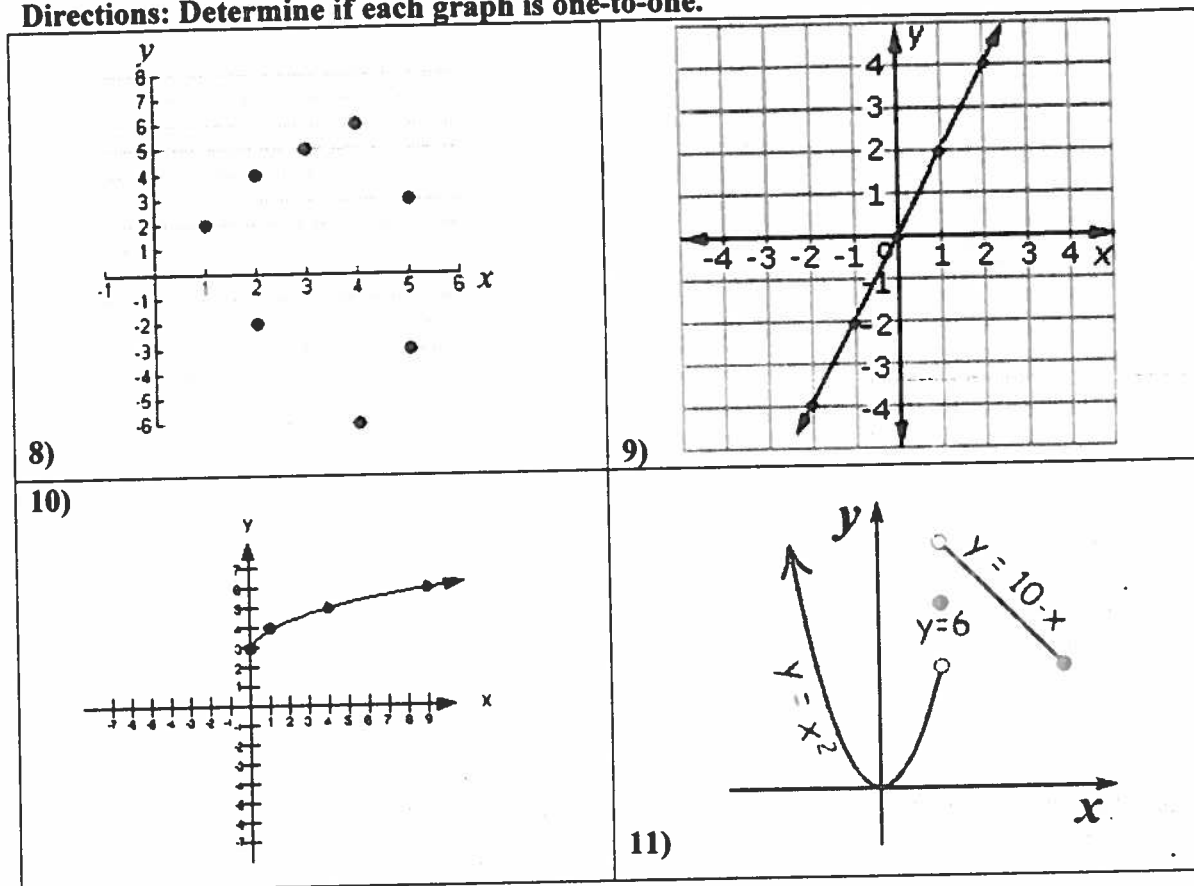
Directions: Give the inverse of each relation and determine if the inverse is a function.

$\{(2, 3)(-1, 5)(3, 0)(9, -2)\}$ 1) <i>Inverse :</i> <i>Function?</i>
$\{(-3, 4)(0, 5)(-3, 1)\}$ 2) <i>Inverse :</i> <i>Function?</i>
$\{(-4, -3)(4, 1)(-2, 5), (2, -3)\}$ 3) <i>Inverse :</i> <i>Function?</i>
$\{(-1, 7)(1, -5)(-6, 1), (6, -3)(2, 3)(5, 1)\}$ 4) <i>Inverse :</i> <i>Function?</i>

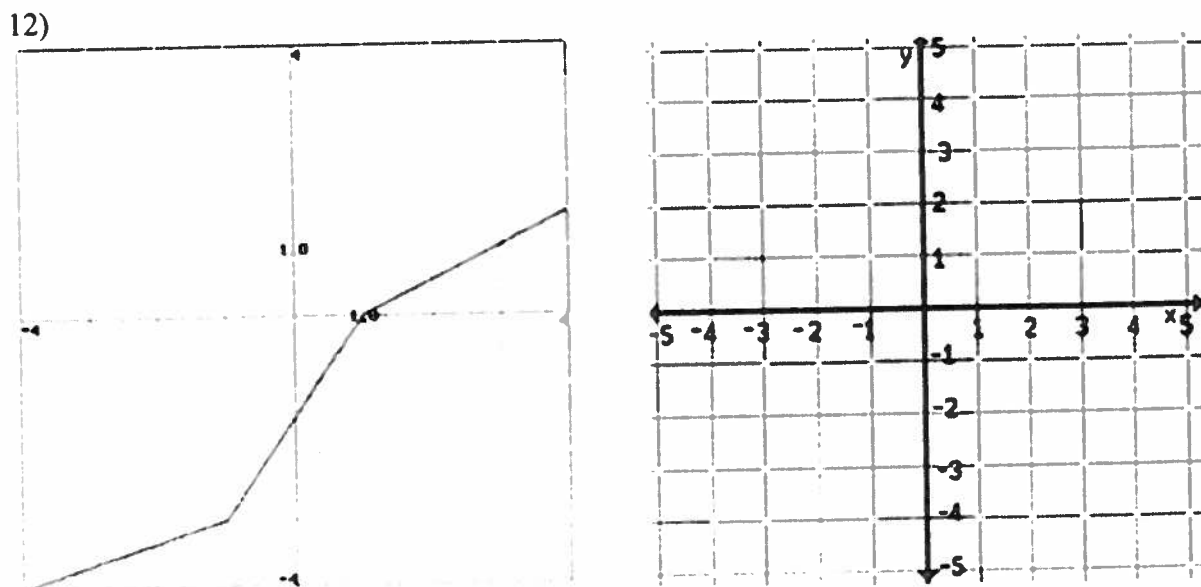
Directions: Give the inverse of each function.

$f(x) = x - 5$ 5) <i>Inverse :</i>	$g(x) = -2x + 8$ 6) <i>Inverse :</i>	$h(x) = 3(x - 1) + 4$ 7) <i>Inverse :</i>
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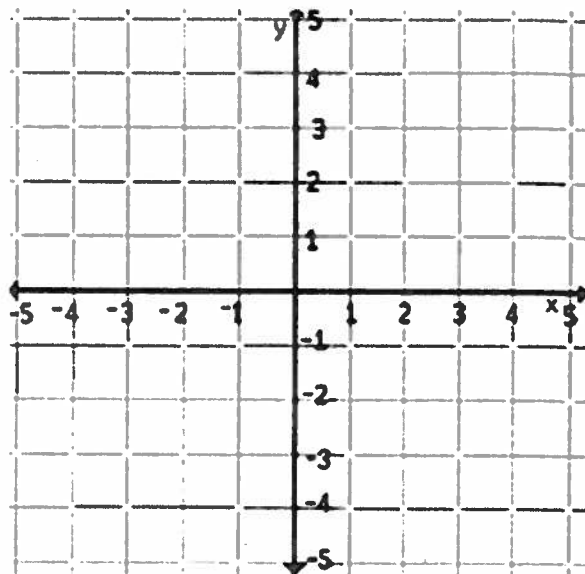
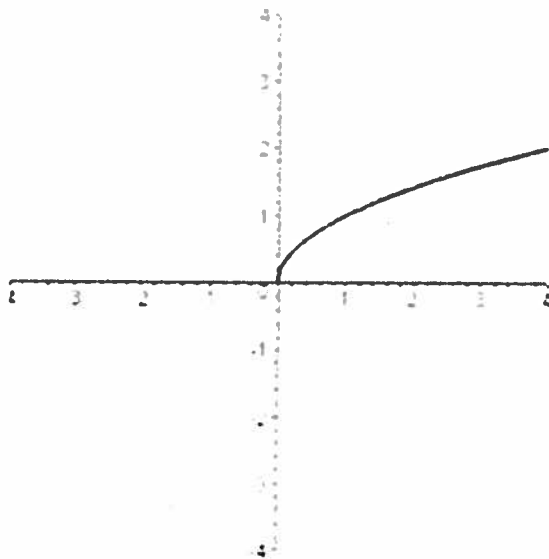
Directions: Determine if each graph is one-to-one.



Sketch the inverses of each functions:



13)



14) The point $(2,8)$ on the graph of $f(x) = x^3$ has been shifted to the point $(1,-2)$ after a transformation. What equation would equate this transformation?

15) The point $(9,3)$ on the graph of $f(x) = \sqrt{x}$ has been shifted to the point $(3,5)$ after a transformation. What equation would equate this transformation?

16) How will these following equations adjust the basic graph of $f(x) = |x|$?

a) $f(x) = |x+1| - 3$ _____

b) $f(x) = -\frac{2}{3}|x| + 2$ _____

17) How will these following equations adjust the basic graph of $m(x) = \sqrt{x}$?

a) $m(x) = \sqrt{x-1} + 6$ _____

b) $m(x) = 2\sqrt{-x}$ _____

18) Using the basic function $g(x) = x^2$, write the equation indicated by the following:

a) Shift down 3 units and a shift 1 unit to the right. _____

b) Shift to the left 2 units and narrower. _____

19) Using the basic function $h(x) = \frac{1}{x}$, write the equation indicated by the following:

a) Shift up 4 units and a shift 2 units to the right. _____

b) Shift to the left 3 units and reflected around the x-axis. _____